

NEWSPLASH

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Communication is Key to Discovery Island Waterpark Success

by Ray Dunham, Special Use Facilities Division Director,
Greenville County Recreation District

Greenville County Recreation District (GCRD) recently embarked on a \$2.7 million project that included the demolition of an existing pool, renovation of a bath house, and construction of Discovery Island Waterpark. GCRD had been operating Southside Pool for more than 30 years, and it had many safety and chemical concerns. GCRD worried about an unsafe deck, loose pool tiles and, filtration and mechanical problems. Southside Pool also needed an annual subsidy of more than \$50,000 since only 7,000 guests visited the facility in attendance each year.

In the fall of 2003, the District decided to demolish the old Southside Pool facility and construct Discovery Island Waterpark in its place. The water park would provide enjoyment for the entire community, help promote the Recreation District and provide a better value for taxpayers. Early in the process, Water Technologies Inc. (architects and engineers) and GCRD staff realized that communication with all involved parties would be essential. Therefore, DHEC was contacted via conference call to discuss the permitting and review process and state regulations.

Once the waterpark was fully designed, GCRD put the construction

out to bid, then awarded the bid. DHEC began a detailed review of all plans. Any questions that arose were quickly answered via e-mail, telephone and person-to-person communication between GCRD, DHEC, Water Technologies and the contractor. All concerns regarding the design and operations were addressed with comprehensive meetings. Throughout the process, any questions regarding change orders or variances were properly answered through approved submittals.

To assure a smooth construction and approval process, DHEC was invited to do a preliminary inspection of the facility to make sure it was in compliance. Concerns were quickly resolved, and the final inspection was effortless. This ensured a smooth opening of Discovery Island Waterpark.

Discovery Island went on to have an exceptional year with more than 118,000 guests safely in attendance. The project was well received by the community.

As an operator and owner, I strongly encourage anyone renovating facilities or constructing new facilities to include DHEC as early in the process as possible and to continuously communicate with agency staff throughout the process. We found that DHEC staff were extremely helpful in taking time to answer any questions that arose during the construction process. The earlier you can include

What do I need to do to be certified as a pool operator in South Carolina?



Call the
Environmental
Certification
Board at (803)

896-4430 for an application packet. This packet gives you all the necessary information on applying and testing. The application fee is \$50. Once you have submitted your application and \$50 fee, you will receive a postcard from Applied Measurement Professional (AMP) notifying you of your eligibility to take the exam. The card will have the AMP telephone number, (800) 345-6559, and Web site <http://www.goAMP.com> so you can register for your exam. Cost of the exam is \$95.

Once you have passed the exam, you will be sent a notification letter from the Environmental Certification Board with your license number, and you will be allowed to operate from that letter until your pocket card and certificate arrive.

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Communication can't

DHEC and the more open and frequent communication by all parties involved, the easier the permitting, construction and inspection process will be. This will ultimately help to ensure the safety and success of your facility.

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The Heat is On

Using Solar Heating Systems in Public Pools

by Coy Watts, Recreational Waters Permitting



During the last two years, DHEC has received several inquiries regarding the use of solar panels for the heating of public swimming

pools. Currently the state's public swimming pool regulation does not contain any design criteria for heating pool water using solar energy. However, DHEC has learned and is learning more each day about heating pool water through the use of solar energy.

Using what has been learned, along with consulting people in the industry and other regulatory programs (i.e., other states), DHEC has put together some basic criteria for the use of solar energy in public pool heating. The criteria must be met to get approval for the use of solar systems to heat public swimming pools. Due to the small pool volumes, the use of solar systems on type "D" and "C" pools is not allowed at this time.

The first step is to properly submit the proposed work. For existing pools, this would be through a change order submittal, and for new pools, it would be made through the construction permit application package.

The second step is providing the proper information, which will include a layout (i.e., piping, panel, pump and monitoring system) of the system that DHEC can approve. The requirements, include the following:

1. The panels and material must be safe for contact with swimming pool water. This means the panel itself, along with the piping and fittings, must be made of a safe material that will not leach toxic material/substances into the pool water. In most cases it will be required that the panel be certified by the National Sanitation Foundation (NSF) or its raw materials be NSF certified.
2. The piping used must be consistent with currently required criteria for pool piping (i.e., NSF certified, Schedule 40 (or better), PVC pipe).

3. It must be shown that the proposed system will not affect the required pool turnover rate either in operation or standby mode. The system must be laid out so that the combined flow returning to pool can be measured (i.e., gallons per minute).
4. A currently registered professional engineer with the State must sign off on both the design and installation of any panel application that will be installed on any rooftop or other similar structure that would house, entertain, etc. humans and/or animals (e.g., gym roof, hotel roof, barn roof, etc.).
5. Based on flow requirements, a booster pump for the panel system itself may be required.
6. The panel system must be automatically monitored and controlled by a thermostat system that is set for a maximum temperature of 104 degrees Fahrenheit.
7. The return line to the pool must be provided with an in-stream thermometer, which will be used to measure the temperature of the water returning to the pool. All pools that will have solar systems installed must record a daily temperature reading at the time of peak solar activity (note to consult with panel contractors installing the unit along with DHEC for the best time) in the pool's log book.

So far, DHEC has approved the installation of two solar systems on public pools. Solar technology is new to our program and is definitely an inviting technology given the rising cost of energy. So to sum it up, "Yes, solar heating may be used on public swimming pools." Just remember that all installations must first be approved through the proper method (e.g., change order) prior to any work being started. Also, remember that all the conditions listed above will also apply.

If there are any questions regarding this issue or any other permitting related issue please feel free to contact Coy Watts, (803) 898-4257, wattsem@dhec.sc.gov.

The Top Five

Knowing All Five, Could Keep Your Pool Closure-Free

by Jim Ridge, Recreational Waters Compliance

For most of you, the 2006 swimming season will be underway as you read this edition of S.C. DHEC's Newsplash. With so many things to do in order to prepare and keep your pool running smoothly, we thought you might appreciate a "top five" list for avoiding closure and promoting swimmer safety and comfort:

1. Insufficient or excessive chlorine and bromine levels are by far the most common reason for pool closure. These levels must be between 1 to 5 ppm chlorine and 2.3 to 11 ppm bromine. If your reading doesn't fall within these ranges, close your pool or spa until you get a good test result. Remember that last year's test kit may be the cause of your low or high readings. Most manufacturers recommend starting the season with a new kit, or at least fresh reagents. Mismatched brands of test chemicals or reagents that have been exposed to extreme summer heat will not give you an accurate reading.
2. pH range is another leading cause of closures. Most owners don't appreciate the significant effect that pH has on the efficiency of chlorine and on swimmer comfort. Your pH should always remain between 7.2 and 7.8. In addition, proper pool water pH along with balanced total alkalinity and calcium hardness will help protect your pool's plaster finish.
3. The third leading reason pools are closed is defective or unsecured



main drain covers. It may seem trivial at the time of the inspection but multiple drownings occur each year because a swimmer's finger, toe, or even hand becomes stuck in the main drain cover or the drain itself. The main drain covers seem to attract the attention of a lot of younger swimmers, and extra caution is needed to avoid a potential entrapment injury. DHEC recommends an anti-vortex type drain cover, and any style used should always be secured with stainless steel, nylon, or other long lasting tamper-proof screws.

4. Loose or broken pool ladders and handrails rank fourth in the number of pool closure causes. These two pieces of equipment lead a pretty tough life and therefore should receive a thorough inspection before you open each day. Mid-shift checks are also suggested.
5. The last major category of public pool closings encompasses missing or defective safety equipment. Pool immersion accidents and drownings can occur in the blink of an eye. If the shepherd's crook or life ring isn't close at hand or in good condition, death or serious injury could result. Remember that your life ring must display a U.S. Coast Guard approval number and be a minimum of 20 inches in diameter. It should be securely fastened to a fresh throwing line that reaches the width and a half of your pool. The shepherd's crook must be permanently attached to a 12 foot pole (it may be collapsible if kept in good condition and extended when in use) and be mounted in a conspicuous location.

In swim season 2005, 33.5 percent of pool closures were due to "other" causes. These include lack of or inoperable emergency notification device, disinfection or recirculation equipment not operating, cloudy pool water, and lack of records for the pools operation (pool log) or operator.

Remember, unpleasant and unprofitable closures can be prevented by vigilance and specific attention to a few areas of the pool. Physical pool area security, water chemistry and clarity, pool safety equipment, and patron behavior all contribute to a positive, enjoyable pool experience for all swimmers. By staying on top of the issues listed above you'll likely be accident and closure free in 2006.

To help ensure correct readings of chlorine and pH levels, it is important to start the swimming season with fresh test kit reagents or a new pool test kit.

EQC District Offices

The local Environmental Quality Control (EQC) Office performs compliance inspections and can provide technical assistance. Check the numbers below for the office in your area.

Aiken Office..... (803) 641-7670
Aiken, Orangeburg, Barnwell, Bamberg, Allendale, Calhoun

Anderson Office..... (864) 260-5569
Anderson, Oconee

Beaufort Office..... (843) 846-1030
Beaufort, Jasper, Colleton, Hampton

Charleston Office..... (843) 740-1590
Charleston, Berkely, Dorchester

Columbia Office..... (803) 896-0620
Richland, Lexington, Newberry, Fairfield

Florence Office..... (803) 661-4825
Florence, Dillon, Marion, Mrlboro, Darlington, Chesterfield

Greenville Office..... (864) 241-1090
Greenville, Pickens

Greenwood Office..... (803) 641-7670
Greenwood, Abbeville, Laurens, Saluda, Edgefield, McCormick

Lancaster Office..... (803) 285-7461
Lancaster, Chester, York

Myrtle Beach Office..... (843) 238-4378
Horry, Georgetown, Williamsburg

Spartanburg Office..... (864) 596-3800
Spartanburg, Cherokee, Union

Sumter Office..... (803) 596-3800
Sumter, Kershaw, Lee, Clarendon

DHEC Central Office Contact Numbers

Main Telephone Number (803) 898-4300

Main Fax Number (803) 898-4215

For questions concerning construction permits and change orders, call Shawn Clarke (803) 898-3544

For questions concerning program policies and compliance issues, call Jim Ridge (803) 898-4015

For questions concerning operating permit fees and address changes, call Marquisha Williams (803) 898-3540

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NEWSFLASH



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